**Amendments to the Claims:**

1. (Currently amended) A ~~critical dimension (CD) control method for semiconductor fabrication processes~~ method for forming a semiconductor feature with controlled critical dimension, comprising:

providing a substrate;

depositing a semiconductor layer on said substrate;

depositing a cap layer on said semiconductor layer;

forming a photoresist pattern on said cap layer, the photoresist pattern having a top surface and vertical sidewalls;

selectively sputtering a silicon thin film merely on said top surface and said vertical sidewalls of said photoresist pattern, but substantially not on said cap layer; wherein thickness of said silicon thin film on said vertical sidewalls is "x", while thickness of said silicon thin film on said top surface is "y", and $x \neq y$;

using said silicon thin film and said photoresist pattern as etching hard mask, carrying out an anisotropic dry etching to etch said cap layer, thereby transferring said photoresist pattern to said cap layer; and

continuing said anisotropic dry etching, using said patterned cap layer as etching hard mask to etch said semiconductor layer, thereby forming said semiconductor feature.

2. (Currently amended) The ~~CD control method for semiconductor fabrication processes~~ method for forming a semiconductor feature with controlled critical dimension according to claim 1 wherein said semiconductor layer comprises a polysilicon layer.

3. (Currently amended) The ~~CD control method for semiconductor fabrication processes~~ method for forming a semiconductor feature with controlled critical dimension according to claim 1 wherein said semiconductor layer comprises a silicide layer.

4. (Currently amended) The ~~CD control method for semiconductor fabrication processes~~ method for forming a semiconductor feature with controlled critical dimension according to claim 1 wherein said cap layer is made of silicon nitride.

5. (Currently amended) The ~~CD control method for semiconductor fabrication processes~~ method for forming a semiconductor feature with controlled critical dimension according to claim 1 wherein ~~thickness of said silicon thin film on said vertical sidewalls is "x", while thickness of said silicon thin film on said top surface is "y", wherein xx <~~ x < y.

6. (Currently amended) The ~~CD control method for semiconductor fabrication processes~~ method for forming a semiconductor feature with controlled critical dimension according to claim [[5]] 1 wherein [[xx < 0]] x < 50 angstroms.

7. (Currently amended) The ~~CD control method for semiconductor fabrication processes~~ method for forming a semiconductor feature with controlled critical dimension according to claim [[5]] 1 wherein [[xx < 0]] x < 10 angstroms.